

Building the Road to Force 2025

9:SEP:2014



LTC Robert Ferrell

Chief Information Officer/G-6



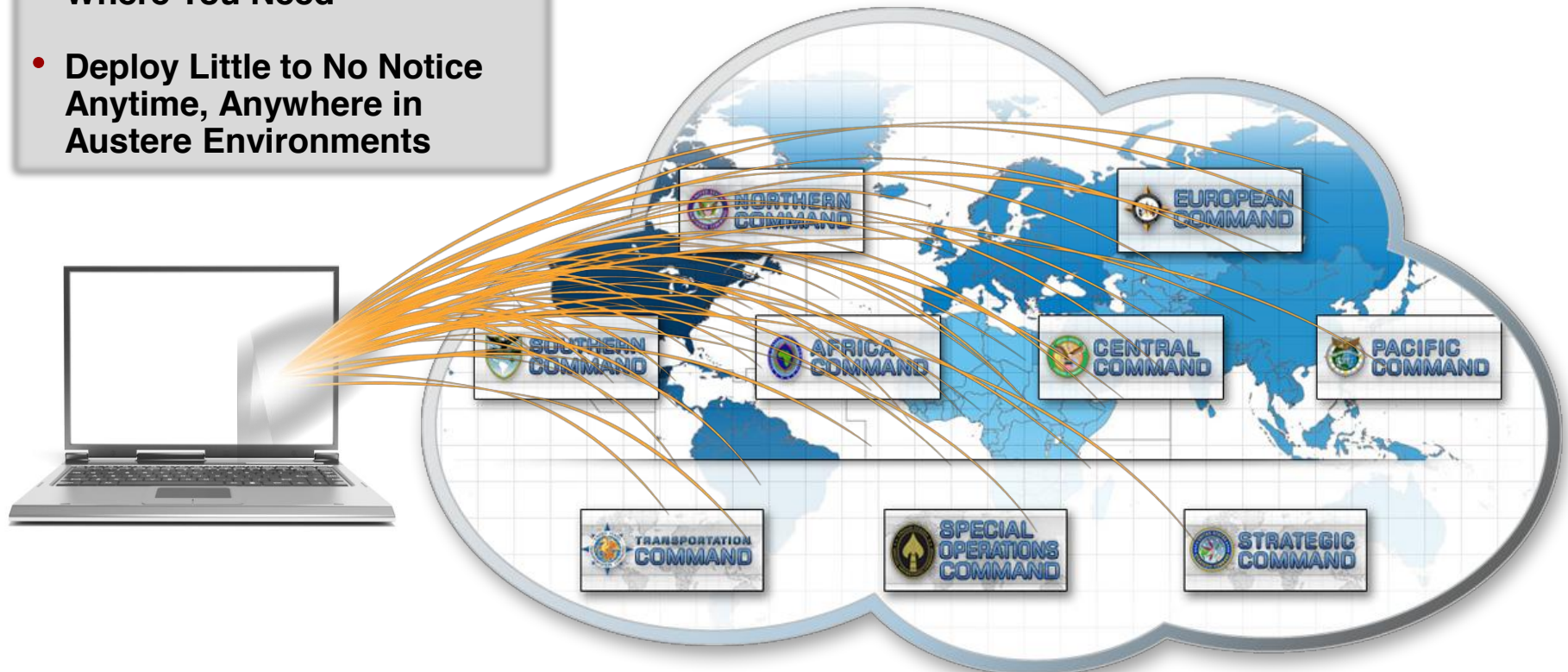


Army's Future Force

The Future Force Must be:

- **Leaner, More Lethal, Expeditionary and Agile Teams with More Combat Power**
- **Deploy Only What You Need Where You Need**
- **Deploy Little to No Notice Anytime, Anywhere in Austere Environments**

The Army's Future Network Must Provide Real-time, Secure Information at the Point of Need. Always-on, Actively Defended, Inherently Secure, and Globally Available, this Platform Underpins the Army's Institutional and Operational Missions.





The Network for 2025 and Beyond

Advancing the Army's Capability

ARMY 2020

➤ *Near term way-point - Army of today*

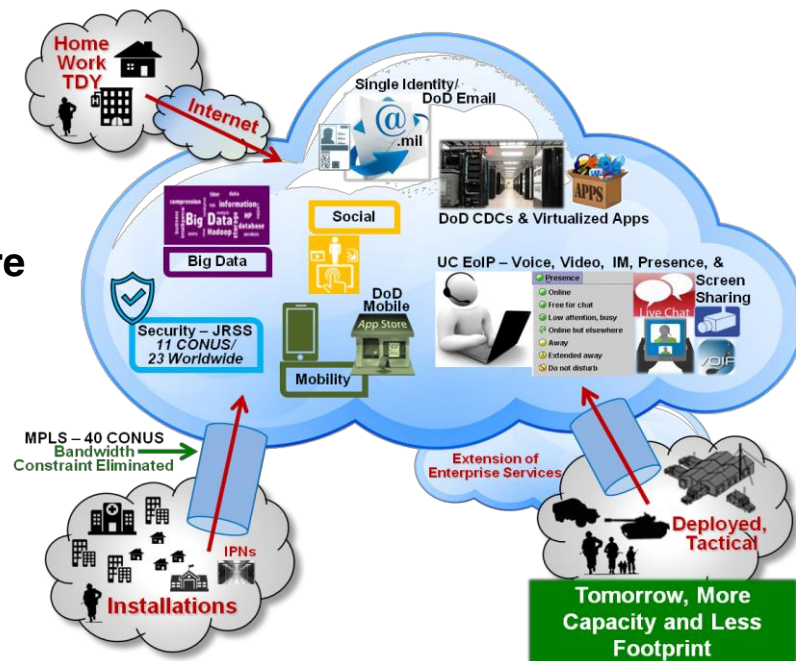
Force 2025

➤ *Leaner force - equal to or more capable than today*

Beyond 2025

➤ *Operationally significant expeditionary force*

- ✓ Must allow commanders the ability to integrate and synchronize combined arms, joint, interagency, and multinational elements in order to seize, retain, and exploit the initiative
- ✓ Must provide capabilities for early and forcible entry operations from home station to operations in austere environments
- ✓ Must be capable of scaling up and down based on changes in mission variables
- ✓ Must provide operational flexibility
- ✓ Must enable mission command by enhancing a leader's situation awareness and ability to visualize, describe, direct, lead, and assess operations

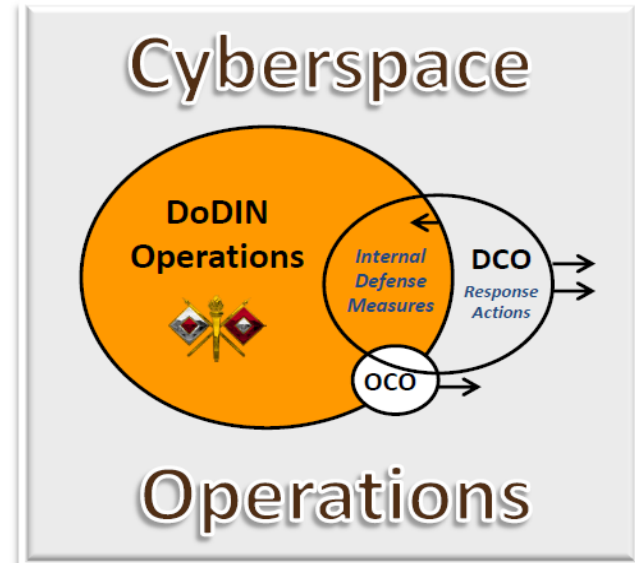




Our Role in Cyber

- **Signal Regiment's Mission is to Build, Operate, Maintain and Defend the Army Network**

- Cyberspace Domain is the Only Man-made Domain
- Signal is the provider & Mission Agnostic Defender
- Day-to-Day dependence on the Network is Ever-Increasing
- **DoDIN Operations is Critical** – Inherently Joint / Secure Network, Enabling Distributed Mission Command, Moving Data to the Commander's point of need
- **Required Leader Development** of Officers, Enlisted, and Civilian workforce



- **The Mission of the Signal Corps is Key and Central to Success in Cyberspace Operations**

- Our Architecture, Standards, NetOps, Maintenance, etc... More Important Today Than Ever Before
- Regiment Continues to Build, Operate, Maintain and Defend the Network... Cyber Forces Maneuver In and Around the Network
- Our Nation Depends on Both the Regiment and Cyber Forces Working Together

Signal, INTEL & Cyber – Teaming for Success in Cyberspace



What We Promised

Capacity & Security Enhancements

- Eliminate Bandwidth as a Constraint
 - More Capacity
 - Faster Speeds
- Connectivity – Physical Path Diversity
- Flattening Campus Architecture – Simplified Through Single Security Stack
- Greater Security – Reduced Footprint



ITMR Savings

- **Enterprise Services** – Software Licensing, Email, IP Voice/Video, SharePoint, and Unified Capabilities
- **Capacity** – Data Center Consolidation and Bulk Buys of Network and Building Switches
- **Security** – Joint Regional Security Stacks (JRSS)

Computing Infrastructure Efficiencies

- Leverage Efficient Utilization Through Economies of Scale
 - Storage and Processing
 - Enterprise Services
- Consolidate/Close
 - Army Data Center Closures (533 by FY18)
 - Application Rationalization and Migration
 - Target: Retire 50%
 - Migrate All Enterprise Applications by FY18

Integrated Network Support

- Integration Between Operating and Generating Force Network Support
- Distributed Data & Services – Fewer Boots on the Ground with Increased Command and Control/Situational Awareness
- Providing Essential Split-Base Ops Capability for III Corps, 101st AA and 4th ID
- Enhanced Training, Planning and Technical Readiness with Installation as a Docking Station

Irreversible Momentum



How We Are Doing



Capacity & Security Enhancements – MPLS/JRSS

- **Joint Regional Security Stacks (NIPR)**
 - IOC at Joint Base San Antonio (*Sep 14*)
 - IOC at Wiesbaden (*Nov 14*)
 - Installing 2 Stacks in SWA (*Completion - Dec 14*)
- **Building Switches – FOC at 8 CONUS Installations (*By Dec 14*)**
- **Installed MPLS at 27 Installations (*Sep 14*)**
 - 22 in CONUS – 2 in Europe
 - 3 in SWA – Resourced for Additional 55 Sites




Integrated Network Support

- **Installation as a Docking Station Widely Implemented Across the Operating Force**
 - Standards and Best Practices in Development – Initiated Technical Reference Architecture
- **Enabling Split-Base Operations**



How We Are Doing

Computing Infrastructure Efficiencies

- 
- **Leading Results in Data Center Consolidation**
 - 276 Closed to Date – 52% of Target Goal to Close 533 by End of FY18
 - 1578 Servers Eliminated; 1071 Apps Killed
 - **Great Headway in Extending Enterprise Services to the Edge**
 - ✓ – Completed DEE on NIPR and SIPR: Migrated 1.5M Joint and Army Users (Initiating Pilot to Extend DEE to Tactical Space)
 - Unified Capabilities Underway – Army/AF Transitioning to DISA Services
(DISA's Analysis of Alternatives To Be Completed by Sep 14)
 - **Transitioning to Internet Protocol (IP) VTC** – FORSCOM IP-based VTC Pilot Ongoing



Delivering the Next Capabilities



**Reduce
TOC
Footprint**

**Strengthen
Cyber
Security**

**Simplify
NetOps
and UTR**

**Intuitive
User
Interfaces**

**Increase
Mobility
and Agility**

Objective Technical Roadmap

A technical framework that identifies injection of next generation technologies into our baseline SoS architecture to meet the evolving operational need from today through 2025



CS13/14...

FY16

FY19

FY20 and Beyond

Mission Command: *MC Anywhere, Anytime, with Any Team, on Any Device* - Warfighting capabilities and supporting network that perform in a similar fashion

Network: *Seamless On Demand Networking* - Flexibility to attach or detach (with limited/no planning) to whatever

Cyber / IA: *Fighting through the Attack* - Improving tactical capability to defend against malicious cyber attacks, execute integrated offensive/defensive cyber

NetOps: *Transparent Operations* - Integrated LWN NetOps capability that supports the network from dismounted soldier to the strategic

Implementation: *Simplify, Reduce, Enhance* - Simplified setup and emplacement; Reduce deployed Field Support Reps & required logistics tail; Enhance



CIO/G-6 Priorities

Providing Signal Capabilities to the Force

Enhancing Cyber Security Capabilities

Increasing Network Throughput and Ensuring Sufficient Computing Infrastructure

Delivering IT Services to the Edge

Strengthening Network Operations (NetOps)

Army Efforts (FY15-18):

Improving Deployed Operations & Split-Base Ops

- Driving End-to-End Focus
- L/V/C Tng & IaaS

Robust Mobile Environment



Classified Capabilities –

- NextGen Device, Samsung S4: Oct 14
- Addition of Mobile Device Manager and Data at Rest: Nov/Dec 14
- Unclass – DISA Will Upgrade & Release New Capabilities Quarterly



Multi Protocol Label Switching (MPLS)

- 13 CONUS Installations FOC (Jun 15)
- OCONUS – SWA Contract Awarded (by Oct 14)
- Additional #s Pending Funding

Commercial Cloud Pilot (FY15/16)



Unified Capabilities Voice, Video, IM/Chat, Presence, & Screen Sharing

- Soft UC to ~426K Users (FY15)
- Joint RFP (1QFY15) / Contract (3QFY15)

Maturing the Workforce (Mil & Civ)

- Integrating Signal/Cyber Common Core Curriculum
- Career Program 34 – Incorporating Cyber (FY15)
- Seeding Cyber Branch



Joint Regional Security Stacks (JRSS)

- 11 CONUS/3 OCONUS (by 3QFY15)
- Begin SIPR Implementation (FY15)
- E2E Visibility – First Time (FY18)

Data Center Consolidation

- FY15 Objective: 366 Closures
- FY16 Objective: 466 Closures
- FY18 Target Goal: 533 Closures

Applications & Sys Migration

- Go/No-Go Execution at Redstone (15 Dec)
- Extend to Other Large Data Ctrs (FY15-18)



Single Service Mgt System for Entire Network (NetOps)

- Improve Ability to Monitor, Operate and Maintain – Award Contract (FY17)
- Efficient Operations & Savings
- Component of Joint Mgt Sys (JMS)

Way Ahead

- **Complete Capacity and Network Security Upgrades (NIPR & SIPR)**
- **Continue to Kill or Modernize, Virtualize, and Move Army Applications to DoD or Commercial Clouds**
- **Move Faster to Enterprise Wired and Wireless Unified Capabilities and Expedite the Elimination of Legacy Wired Phone Switches**
- **Partner with ASA (AL&T) to Implement Common Operating Environment (COE) Architecture Sooner in order to:**
 - Simplify the Tactical Network,
 - Improve Wireless Communications, and
 - Simplify Tactical to Institutional Interfaces
- **Reengineer and Improve Army and Joint Enterprise NetOps End-to-End Processes**
- **Improve Cyber Defense Capabilities by Modernizing Network Sensors and Leveraging Big Data Analytics**



Accelerating Momentum



How You Can Help

- **Challenging Times – Appreciate Your Partnership**
- **Be Good Stewards – Continue to Help Drive Competition and Innovation through NIEs and ELAs**
- **Help Us Focus on Software Solutions and the Common Operating Environment (COE)**
- **RDT&E / IRAD – Finding the Right Balance for Investing in the Future**
- **Mutual Commitment to Work Together**

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What's Next?

Future Operating Environment

- Increased Momentum of Human Interaction
- Potential for Enemy Technology Overmatch
- Proliferation of WMD & Technology
- Increased Importance of Cyberspace & Space Domain
- Operations among populations in complex terrain
- Continuing Diffusion of Power
- Emerging Nations Demanding More Influence
- Artificial Intel leading to hyper-fast strategic decisions

Industry Initiatives

- Sensors & Electronics
- Virtual Training
- Intelligent / Autonomous Systems
- Cybernetics
- Power & Energy
- Material Science
- Quantum Information
- Assured Position, Nav, Timing
- Mobility

Network 2025 & Beyond

Institutional

- Joint to the Core
- Leverage Buying Power
- Security Woven into Network Fabric
- Operationalize the Cloud
- Enable Virtual Training / "Gaming"
- Ensure Access & Freedom of Action in Cyber Space
- Investment in innovative technologies

Enroute Mission Command

- Global Situational Awareness
- Ubiquitous Access to Data
- Ready for Forcible Entry
- Robust En Route MC
- Employ a Single Mobile / Capable Command Post

Tactical Space

- Leverage Commercial Nets
- Secure Mobility
- Tactical Cloud Nodes
- Networks form, evolve, dissolve, reform
- Enable Sensor Based Sustainment
- Reduce the Footprint
- Enable a Tailored Force
- Intuitive Equipment Ops

Success Rests in the Human Application of Technology